

**Establishment of Target Reserve Level for  
the California Power Authority Investment Plan**

**2002-07-01**

**Written Comments in Response to Notice of Rulemaking 2002-07-01**

ALSTOM ESCA Corporation (ALSTOM), headquartered in Bellevue, Washington, is a worldwide leader in the development of software solutions for the electric generation, transmission, and distribution marketplace. With a 23-year history in delivering real-time grid management systems, ALSTOM is the dominant supplier of IT solutions for Independent System Operators, utilities and market participants in the U.S. and abroad.

ALSTOM delivers real-time information combined with state-of-the-art technology to give system operators intimate knowledge over grid conditions in their day-to-day operations. Operators gain real-time visibility on the status and availability of both traditional and distributed energy resources; and can monitor, aggregate, and dispatch energy resources under a single platform. With real-time information and selective dispatch & curtailment capability, operators can in turn manage regional markets & demand response programs in an intelligent fashion.

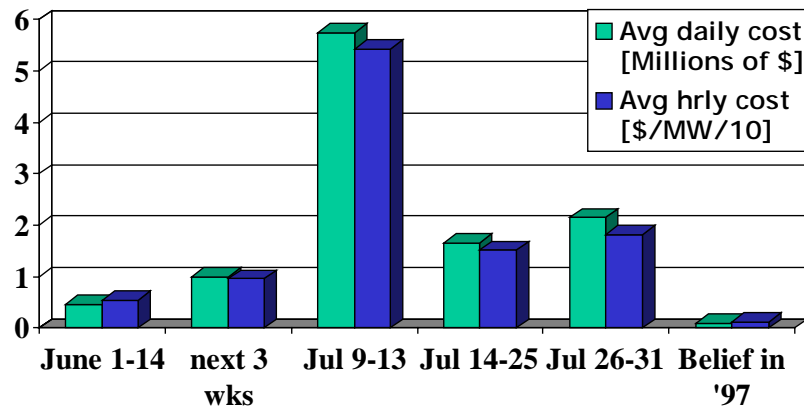
ALSTOM combines depth of understanding in power system operations, analytical tools & techniques, and energy market protocols to effectively meet the information technology needs and current-day challenges faced by utilities, regional market operators, and market participants. With a proven track record in providing leading IT solutions, the company continues to apply a culture of innovation and energy market expertise to effectively address technical & operational challenges faced in the electric power industry. We are pleased to provide the following comments to the CPA's Notice of Rulemaking on Reserves.

The context for discussion is focused on Reliability Reserves, which can be procured from generation (Megawatts) or responsive load (Negawatts). In its Notice the CPA mentions one of its responsibilities is to "achieve an adequate energy reserve capacity in California". Although adequacy of reserves often influences the economics of *energy* procurement, the question of adequacy is primarily a power system *reliability* issue. Therefore, the goal of determining an adequate reserve level through this rulemaking appears to be for the primary purpose of maintaining system reliability, while considering the associated costs and benefits.

The CPA notes in its Notice that setting reliability reserve margins using historic practices and targets can be problematic in a restructured environment. While in general agreement, we also venture to suggest that relying on reserve margins may be an inadequate mechanism for ensuring system reliability in restructured markets. Existing wholesale market data shows that restructuring has led to increased reliability costs in California. The chart below shows costs for procuring reserves during the first summer of ISO operation (1998). Results indicate a price premium had been paid in the procurement

of Reliability Reserves during the first summer of ISO operation. The ISO reportedly paid millions of dollars over certain days for Reliability Reserves, compared to the belief & expectation of thousands of dollars prior to industry restructuring. Data for subsequent years exhibit similar trends, inferring California has paid a price premium for maintaining system reliability since the onset of industry restructuring.

Prices in CA reserve markets during first summer ('98)  
of ISO operation when supply bids were not capped



Source: ECCO International

In various geographic regions where electric power industry restructuring has occurred, Reliability Reserves have commanded a price premium particularly during times of peak demand. Very often the price premium is ultimately passed down to customers. Whether it be operating reserves that the ISO procures or capacity expansions for augmenting system reliability, customers generally end up paying for reliability measures. Consistent with this notion, FERC's NOPR on Standard Market Design prescribes an RFP process for the procurement of additional capacity to be paid for by customers in the event that private investment fails<sup>1</sup>.

Since customers are directly impacted by electric service reliability or lack thereof and customers pay for measures taken to maintain system reliability, customer preferences for reliability should be considered in the CPA's Rulemaking process. Information on preferences for reliability could be collected through the LSE's that have an obligation to serve. LSE's with an obligation to serve are in a natural position to represent their customers' reliability needs and devise retail tariffs to better accommodate those needs.

The CPA may already be aware that FERC's SMD prescribes that each LSE acts to meet its share of future regional needs through self supply, contracts to purchase generation, biddable-demand or other forms of demand response<sup>2</sup>. FERC further states that an LSE

<sup>1</sup> Ref. No. 347 in FERC's NOPR on SMD

<sup>2</sup> Ref No. 475 in FERC's NOPR on SMD

may choose a higher level of reliability by procuring more reserves than required, and can procure additional reserves as a hedge for own use during peak prices.<sup>3</sup> Moreover, the NOPR mentions that LSEs failing to meet their resource adequacy requirement should be subject to a penalty price, instead of having their electric service affected by the regional market operator.<sup>4</sup> However, it leaves open for comment whether the market operator should first curtail service to these LSEs.

Such issues left open in FERC's NOPR on SMD indicates a discussion and growing awareness of the issue between paying a price premium for Reliability Reserves during peak hours in a restructured environment or choosing to deviate from standard operational procedures and curtailing service (whether it be affecting service to LSEs, entire circuits, or individual customers). The answer to such questions inherently lie with end-use customers and their serving LSEs. To better uncover a sensible economic answer, state regulators can instruct LSEs to assess customer reliability needs and procure reserves according to their customers' needs.

Furthermore, methods for serving customers according to their preferences for electric service reliability should be examined, along with technologies for implementation. A possible venue for ruling on the tariffs and associated infrastructure to enable electric service reliability differentiation among customers could be the CPUC's Rulemaking 02-06-001 (on Policies and Practices for Advanced Metering, Demand Response, and Dynamic Pricing). The technology required for reliability differentiation might piggyback on or overlap in functionality with the infrastructure prescribed through the CPUC Rulemaking. Since the Rulemaking is investigating program and infrastructure solutions that can affect all customer classes across all the state IOUs, it may offer the proper venue for investigation of infrastructure to also enable reliability differentiation among individual customers.

ALSTOM can make available to the CPA in the context of the Reserves Rulemaking its own practical experience on Reliability Reserve and market design issues, as well as costs, benefits, and feasibility of different implementations of demand response.

Respectfully submitted,

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<sup>3</sup> Ref No. 496

<sup>4</sup> Ref No. 538

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